APPENDIX E

DELTA LEVEE EMERGENCY MANAGEMENT PLAN

DELTA LEVEE SYSTEM INTEGRITY PROGRAM

CALFED
Bay-Delta Program

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DELTA LEVEE EMERGENCY MANAGEMENT PLAN

Foreword:

This paper provides a description of the CALFED Bay-Delta Program's approach to emergency management for the Delta. The plan will build upon existing emergency management systems, identify pre-emergency measures and post-disaster recovery measures, and enhance integration of local and regional emergency management agency actions to protect Delta resources in the event of a disaster.

This element of the Program, like all components of the Program's alternatives, is being developed and evaluated at a programmatic level. More focused analysis and environmental documentation of specific targets and actions will occur in subsequent refinement efforts.

Introduction

The Emergency Management Plan will build upon existing state, federal, and local agency emergency management responsibilities to improve protection of Delta resources in the event of a disaster. It will identify deficiencies and propose specific actions which will improve flexibility to respond to changing Delta conditions, assure that appropriate resources are available and properly deployed, and provide for effective disaster recovery measures.

Background

The most recognizable threat to Delta islands and resources in the Delta is inundation due to winter flood events. In addition, other potential disasters threaten these same resources. They include seismic events, fire, burrowing animals, toxic spills, and failure of Delta levees during low flow periods. Approximately 20 islands have flooded since the 1960s, including multiple flooding of some islands.

There are no reports of Delta levee failure and island inundation as a result of a seismic event. However, there are several active faults located sufficiently close to the Delta to pose a potential threat. There are numerous natural gas storage and pipeline facilities in the Delta where fires could originate in the event of a failure of such a facility. Although plans are in place to address fires at these facilities, fires on Delta islands with peat soils are extremely difficult to extinguish. Commercial shipping traffic regularly passes through the Delta and the cargo of some of these ships can be toxic to certain resources in the Delta. The inadvertent release of cargo such as fertilizer could potentially affect water quality in the Delta, particularly during low flow periods. Another potential threat to Delta water quality is the failure of Delta levees during low flow periods. This type of disaster can result in intrusion of salinity from the Bay, as occurred during the 1972 inundation of Brannan/Andrus Island.

The existing emergency management structure is designed to coordinate activities of multiple State, Federal, and local agencies with varying responsibilities to provide emergency assistance in the event of a disaster. The Standardized Emergency Management System (SEMS) provides a framework for coordinating state and local government emergency response in California using the incident command system and mutual aid agreements. SEMS facilitates priority setting, inter-agency cooperation, and the efficient flow of resources and information.

When the Governor declares a State of Emergency, the Governor's Office of Emergency Services serves as the coordinator for state agency response. When an incident appears to potentially exceed the resources of the local responsible agency, emergency personnel conduct on-site evaluations to determine what, if any, additional emergency support is warranted. Cities and counties can proclaim local disaster events and, in general, local or maintaining agencies are first in line for responsibility to address disaster events. Although certain agencies may have resources to provide initial emergency action, they typically cannot provide a sustained effort during a large disaster event. The majority of local agencies do not have the resources to address major disaster events, and existing agreements may provide a means for sharing additional resources from surrounding areas. The federal government provides financial assistance through the Federal Emergency Management Agency under declaration of a Presidential Disaster; however, other federal agencies such as the U.S. Army Corps of Engineers may provide assistance and/or resources under existing authorities.

There is a tendency to focus emergency response measures on those sites facing imminent failure at the expense of actions which could prevent threatening sites from escalating into emergencies. Current emergency response procedures could also be streamlined to reduce delays in mobilizing resources. A quick response can often prevent costly levee failures.

Emergency Management Approach

The emergency management plan will address the following issues through refinement and implementation of the objectives, targets, and actions identified in Table 1.

- Eligibility criteria needs to be clearly defined with "shelf time" - fixed definitions per agreement for disaster event assistance and post event recovery efforts
- Coordination of available resources and support between agencies, counties, etc.. needs to be addressed. MOU or some agreement between all parties for funding, support, criteria, etc.
- Centralized location for dissemination of information (resources, support adequately addressed ??)

TABLE 1

Implementation Objective	Target	Action
Enhance planning and resource allocation prior to disaster event	Identify guidelines for funding and participation	Purchase materials in advance and place in strategic locations.
		Develop contracts for equipment in advance
	Identify guidelines for multi-agency participation	Implement agreements for participation and coordination
Enhance planning and resource allocation for recovery efforts following a disaster event	Identify repair and recovery criteria to coordinate and fund post-disaster efforts.	Identify resource area recovery and rehabilitation plans
		Prepare updated flood risk assessments.
Establish state, federal, and local cost-sharing plan to assure long-term Delta levee emergency management protection.	Identify necessary funding requirements and beneficiaries to provide equitable distribution of emergency management preparation and recovery costs.	Develop a phasing sequence for implementation of proposed emergency management actions.

This plan will build upon existing emergency management activities to protect critical Delta resources in the event of a disaster. This plan will focus on pre-emergency actions, including initial local response, and post-disaster event actions. The plan will identify total disaster response funding needs for the Delta. This plan can provide an incentive for local participants to continue investment and provide protection for multiple resources.

- Program staff will work with stakeholders, the public, and state and federal agencies, in identifying pre-emergency and post-disaster recovery measures such as:

- Establish a Delta emergency management team consisting of existing state, federal, and local agency personnel among existing agencies with disaster related authorities and responsibilities. This team will enhance coordination and implementation of emergency actions for protecting Delta resources consistent with Program objectives. The focus will be on local agency preparation, coordination, and responsibility to provide enhanced initial response efforts to prevent damages and recovery measures. However, the plan will provide flexibility within each agency for specific implementation of the emergency actions based on resource availability, type of disaster, and extent of disaster.

- Identify criteria and emergency actions consistent with Program objectives to ensure protection of Delta resources. Separate criteria will be needed for various types of disasters such as single island failure during a low Delta inflow period, multiple island failure during a high Delta inflow period, or toxic spill within Delta channels during a low Delta inflow period. In addition, criteria will be needed for emergency actions prior to, during, and after a disaster event. Criteria such as stages or flows in certain Delta channels or seepage flows will determine specific emergency actions. Criteria for threatening situations such as imminent failure of Delta levees would identify equipment and manpower to prevent such failure. For example, stages in the Yolo Bypass or Delta Cross Channel could identify actions such as mobilization of equipment or materials and coordinated planning efforts to evaluate subsequent eventual actions. Criteria for post disaster situations such as after toxic spills would identify actions such as clean-up or other recovery actions. For example, criteria such as depth of flooding or salinity intrusion may identify post-emergency measures such as water management operations, and levee rehabilitation.

- Identify preventive measures to improve the efficiency of implementing emergency actions. Initial emergency actions and resources should be identified and available in advance of a disaster. Examples of preventive measures include identification of potential staging areas, advance collection and strategic placement of materials such as sandbags, visquine, stakes, pumps, etc., and identification of specific emergency actions. It is important to remember that criteria and emergency actions must be simple to understand and easy to implement. Complicated criteria or actions will only hinder emergency response effectiveness.

- Identify recovery measures to prevent damages to adjacent areas and reduce long-term damages of affected areas. Examples of recovery measures include toxic spill clean-up, levee rehabilitation, and habitat restoration. Implementation of these measures to protect Delta resources will be consistent with Program objectives. For example, rehabilitation of Delta levees would incorporate habitat improvements consistent with Ecosystem Restoration Program Plan actions. It is important to remember that criteria and emergency actions must be simple to understand and easy to implement. Complicated criteria or actions will only hinder emergency response effectiveness.